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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,779	12/30/2005	In-Su Joo	PNK0217US	5493
23413 7590 08/10/2009 CANTOR COLBURN, LLP 20 Church Street 22nd Floor Hartford, CT 06103				
EXAMINER WEISS, HOWARD				
ART UNIT 2814		PAPER NUMBER		
NOTIFICATION DATE 08/10/2009		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

usptopatentmail@cantorcolburn.com

Office Action Summary

Application No.

10/538,779

Applicant(s)

JOO ET AL.

Examiner

HOWARD WEISS

Art Unit

2814

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 May 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5 and 6 is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SE/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Attorney's Docket Number: 6192.0590.US

Filing Date: 12/30/2005

Continuing Data: 371 of PCT/KR03/02708 (12/11/2003)

Claimed Foreign Priority Date: 12/11/2002 (KRX)

Applicant(s): Joo et al. (Choi)

Examiner: Howard Weiss

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 1 to 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wei et al. (U.S. Patent No. 5,480,810), Yamazaki (U.S. Patent No. 6,239,470) and Sakaguchi et al. (U.S. Patent No. 6,453,008).

Wei et al. show most aspects of the instant invention (e.g. Figures 1 and 2) including:

- a gate wire formed on an insulating substrate **105** and comprising a gate electrode **122** and a gate line **125**
- a gate insulating layer **140** formed on said gate wire

- a semiconductor layer **156** formed on said gate insulating layer
- a data wire formed on the gate insulating layer and including a data line **165**, a source electrode **162** disposed on said semiconductor layer and a drain electrode **164** separated from said source electrode and disposed on said semiconductor layer
- a photodiode **130** including first **124** and second **138** electrodes with a photo-conductive layer disposed therebetween, said photo-conductive layer comprising N-I-P amorphous, semiconducting layers **132,134,136**, respectively
- a passivation layer **140** on the photodiode and having a contact hole **148** exposing said second electrode
- a bias signal line **166** connected to said second electrode via said contact hole

Wei et al. does not show the passivation layer on the semiconductor layer, the data wire and drain electrode and a light blocking layer covering the photodiode and disposed directly on said passivation layer and the bias signal line. Yamazaki teaches (e.g. Figures 4 and 5) to have a passivation layer **213** on a semiconductor layer **210**, the data wire **216** and drain electrode **209** and a light blocking layer **214** directly on said passivation layer to achieve high performance (Column 1 Lines 42 and 46). It would have been obvious to a person of ordinary skill in the art at the time of invention to have a passivation layer on a semiconductor layer, the data wire and drain electrode and a light blocking layer directly on said passivation layer as taught by Yamazaki in the device of Wei et al. to achieve high performance.

Sakaguchi et al. teach (e.g. Figure 3) to form a light blocking layer covering photodiodes **1A** to provide a means to reduce noise due to dark current (Column 4 Lines 63 to 67). It would have been obvious to a person of ordinary skill in the art at the time of invention to form a light blocking layer covering photodiodes as taught by Sakaguchi et al. in the device of Wei et al. to provide a means to reduce noise due to dark current. The light blocking layer would be directly on said passivation layer and the bias line in Wei et al. when combined with Yamazaki and Sakaguchi et al.

Allowable Subject Matter

3. Claims 5 and 6 are allowed.
4. The following is a statement of reasons for the indication of allowable subject matter:
a thin film transistor array panel as claimed including a disconnected region disposed between the source and drain electrode could not be anticipated nor, in combination, be rendered obvious over the prior art of record.

Response to Arguments

5. Applicant's arguments filed 5/11/2009 have been fully considered but they are not persuasive. The Applicants state that Yamazaki is not analogous art, the light blocking layer would not block x-rays and does not suggest or show the light blocking layer on a bias signal line. In response to applicant's argument that Yamazaki is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, the application of the light blocking layer in Yamazaki is pertinent to all light sensitive devices including photodiode and EL displays.

In reference to the blocking of x-rays, there is nothing in the claim language that suggests this property is part of the instant invention. The layer is described as a light blocking layer and is describe as such in the prior art. Although a claim should be interpreted in light of the specification disclosure, it is generally considered improper to read limitations contained in the specification into the claims. See *In re Prater*, 415 F.2d 1393, 162 USPQ 541 (CCPA 1969) and *In re Winkhaus*, 527 F.2d 637, 188 USPQ 129 (CCPA 1975), which discuss the premise that one cannot rely on the specification to impart limitations to the claim that are not recited in the claim. Also, an intended use clause found in the preamble of an apparatus claim is not

afforded the effect of a distinguishing limitation unless the body of the claim sets forth structure which refers back to, is defined by, or otherwise draws life and breadth from the preamble. (see *In re Casey*, 152 USPQ 235 (CCPA1967); *Kropa v. Robie*, 88 USPQ 478 (CCPA 1951)). Thus, a preamble is denied the effect of a limitation where the claim is drawn to a structure and the portion of the claim following the preamble is a self-contained description of the structure not depending for completeness upon the introductory clause. (see *Kropa v. Robie*, *supra* at 480 and *Ex parte Mott*, 190 USPQ 311, 313 (PTO Bd. Of App. 1975)).

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). The light blocking layer would be directly on said passivation layer and the bias line in *Wei et al.* when combined with the features of *Yamasaki and Sakaguchi et al.*

Claims 3 and 4 were inadvertently omitted from the rejections of the last office action. This has been corrected and, because of their omission, the present rejection has been made non-final.

Conclusion

6. Papers related to this application may be submitted directly to Art Unit 2814 by facsimile transmission. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (15 November 1989). The Art Unit 2814 Fax Center number is **(571) 273-8300**. The Art Unit 2814 Fax Center is to be used only for papers related to Art Unit 2814 applications.
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Howard Weiss at **(571) 272-1720** and between the

hours of 7:00 AM to 3:00 PM (Eastern Standard Time) Monday through Friday or by e-mail via Howard.Weiss@uspto.gov. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy, can be reached on (571) 272-1705.

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at **866-217-9197** (toll-free).
9. The following list is the Examiner's field of search for the present Office Action:

Field of Search	Date
U.S. Class / Subclass(es): 257/ 59, E27.14	thru 8/3/2009
Other Documentation: none	
Electronic Database(s): EAST	thru 8/3/2009

HW/hw
6 August 2009

/Howard Weiss/
Primary Examiner
Art Unit 2814